RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/00/008

Source: 10/008

Date Processed by STIC: 2-8-05

ENTERED



PCT

RAW SEQUENCE LISTING DATE: 02/08/2005 PATENT APPLICATION: US/10/522,668 TIME: 11:47:28

```
3 <110> APPLICANT: Yamanouchi Pharmaceutical Co., Ltd.
              Masayoshi TAKEDA
              Noboru YAMAJI
      5
      7 <120> TITLE OF INVENTION: NOVEL SERINE PROTEASE
      9 <130> FILE REFERENCE: Q85990
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/522,668
C--> 11 <141> CURRENT FILING DATE: 2005-01-28
     11 <150> PRIOR APPLICATION NUMBER: PCT/JP03/09677
     12 <151> PRIOR FILING DATE: 2003-07-30
     14 <150> PRIOR APPLICATION NUMBER: JP2002-223878
     15 <151> PRIOR FILING DATE: 2002-07-31
     17 <160> NUMBER OF SEQ ID NOS: 26
     19 <170> SOFTWARE: PatentIn version 3.1
     21 <210> SEQ ID NO: 1
     22 <211> LENGTH: 1596
     23 <212> TYPE: DNA
     24 <213> ORGANISM: Homo sapiens
     26 <220> FEATURE:
     27 <221> NAME/KEY: CDS
     28 <222> LOCATION: (1)..(1593)
     31 <400> SEQUENCE: 1
     32 atg gag ccc act gtg gct gac gta cac ctc gtg ccc agg aca acc aag
                                                                               48
     33 Met Glu Pro Thr Val Ala Asp Val His Leu Val Pro Arg Thr Thr Lys
                                            10
     36 gaa gte eee get etg gat gee geg tge tgt ega geg gee age att gge
                                                                               96
     37 Glu Val Pro Ala Leu Asp Ala Ala Cys Cys Arg Ala Ala Ser Ile Gly
                    20
                                        25
     40 gtg gtg gcc acc agc ctt gtc gtc ctc acc ctg gga gtc ctt ttg gcc
                                                                              144
     41 Val Val Ala Thr Ser Leu Val Val Leu Thr Leu Gly Val Leu Leu Ala
                                    40
                                                                              192
     44 ttc ctc tct aca cag ggc ttc cac gtg gac cac acg gcc gag ctg cgg
     45 Phe Leu Ser Thr Gln Gly Phe His Val Asp His Thr Ala Glu Leu Arg
            50
                                55
     48 gga atc cgg tgg acc agc agt ttg cgg cgg gag acc tcg gac tat cac
                                                                              240
     49 Gly Ile Arg Trp Thr Ser Ser Leu Arg Arg Glu Thr Ser Asp Tyr His
                            70
    52 cgc acg ctg acg ccc acc ctg gag gca ctg ttt gta agt agt ttt cag
                                                                              288
    53 Arg Thr Leu Thr Pro Thr Leu Glu Ala Leu Phe Val Ser Ser Phe Gln
                        85
                                            90
    56 aag aca gag tta gag gca agc tgc gtg ggt tgc tcg gta ctg aat tat
                                                                              336
    57 Lys Thr Glu Leu Glu Ala Ser Cys Val Gly Cys Ser Val Leu Asn Tyr
    58
                    100
                                        105
    60 agg gat ggg aac tcc agt gtc ctc gta cat ttc cag ctg cac ttt ctg
                                                                              384
```

RAW SEQUENCE LISTING DATE: 02/08/2005 PATENT APPLICATION: US/10/522,668 TIME: 11:47:28

	_	_		_	_	_		_					_	•		_	
	Arg	Asp		Asn	Ser	Ser	Val		Val	His	Phe	Gln		His	Phe	Leu	
62	at a		115	o+ o	000	200	at a	120	a+ a	~~~	a+ a	~~~	125	~~~	at a	++~	432
	ctg Leu																432
66	ВСС	130	110	пси	0111	1111	135	501	DC u	Cry	пси	140	Oru	Olu	пси	пси	
	cag		qqq	atc	cqq	qca		ctq	caa	qaq	cac		atc	tcc	ctq	act	480
	Gln																
	145	-	-		_	150	_		_		155	-				160	
72	gcc	tat	ggc	aca	att	gtg	tcg	gct	gag	ctc	aca	ggg	aga	cat	aag	gga	528
73	Ala	Tyr	Gly	Thr	Ile	Val	Ser	Ala	Glu	Leu	Thr	Gly	Arg	His	Lys	Gly	
74					165					170					175		
	ccc																576
	Pro	Leu	Ala		Arg	Asp	Phe	Lys		Gly	Arg	Cys	Pro	Gly	Asn	Ser	
78				180					185					190			
	ttt																624
	Phe	Ser	_	GLY	Asn	Ser	Gln		Val	Thr	Lys	Val		Pro	Glu	Cys	
82			195					200					205				670
	gac																672
86	Asp	210	GIII	GIU	ASP	Cys	215	Asp	СТУ	ser	Asp	220	Ата	HIS	Cys	GIU	
	tgt		++~	cad	cct	~~~		200	2+4	~~~	~~~		ato	a+ a	~~~	999	720
	Cys																720
	225	Gry	шец	GIII	110	230	тър	Ary	riec	птα	235	Arg	116	Val	СТУ	240	
	atg	αаа	gca	tcc	cca		σασ	+++	cca	taa		acc	agc	ctt	cas		768
	Met																
94					245	0-1	0_0			250	U 2			200	255	0_4	
96	aac	aaq	gag	cac		tat	aga	qcc	qcc		atc	aac	qcc	agg		cta	816
	Asn																
98		_		260		_	_		265					270	-		
100	gtg	, tct	gct	gct	cac	: tgc	tto	aat	gag	tto	caa	gad	ccc	gaco	g aaq	g tgg	864
103	l Val	. Ser	: Ala	ı Ala	His	Cys	s Phe	e Asr	ı Glu	Phe	e Glr	ı Asp	Pro	o Thi	c Lys	Trp	
102			275					280					285	_			
																acc	912
				· Val	. Gly	Ala			Leu	Sei	: Gly			ı Ala	a Sei	Thr	
106		290					295					300					0.50
																gcg	960
		_	J Ala	ı Gır	ı vaı			1 116	e vai	гуз			ь тег	тул	c Asr	Ala	
	305		. ~~		. +++	310		. ~~+	· ~+ ^		315					320	1000
																ctg Leu	1008
114	_	, 1111	. AIC	L	325	_	, vai	. Alc	ı vaı	330		т пес	1 1111	. 561	335		
		ttc	י ממכ	· cao			cac	י כככ	ato				r act	- acc		cac	1056
																His	1000
118			1	340					345	_				350			
		ttc	: cca			aac	r aac	tac			: tca	aac	: tac			ctc	1104
																Leu	
122			355			-	-	360				-	365	_			
124	laag	gag	gac	ttc	ctg	gto	aaç	r cca	gag	gto	, ctg	cag	g aaa	a gco	act	gtg	1152
125	Lys	Glu	ı Asp	Phe	Leu	Val	. Lys	Pro	Glu	Va]	. Lev	Glr	Lys	s Ala	a Thi	· Val	

RAW SEQUENCE LISTING DATE: 02/08/2005 PATENT APPLICATION: US/10/522,668 TIME: 11:47:28

126		370					375					380						
	~~~		cta	asc.	cad	ac a		+ ~+	acc	200	ttg		aac	cat	t c a	ctc		1200
											Leu							1200
	385	пси	пси	тор	0111	390	пец	Cys	лта	DCI	395	1 <b>y</b> 1	Ory	1113	DCI	400		
		aac	agg	atα	ata		act	aac	tac	cta	gac	aaa	aan	ata	αac			1248
											Asp							1210
134	1111	изъ	mrg	1100	405	Cys	AIG	Ory	+ <b>y</b> +	410	тор	OLY	БуЗ	Vul	415	DCI		
	tac	cad	aat	gac		ana	aaa	ccc	cta		tgc	aaa	gag	CCC		aac		1296
											Cys							1230
138	Cys	0111	OLY	420	JCI	OLY	OLY	110	425	vai	Cys	01.4	Ora	430	DCI	Cry		
	caa	ttc	+++		act	aac	atc	ata		taa	gga	atc	aaa		aca	gaa		1344
											Gly							
142	9	1110	435	200		011		440	001		017	110	445	0,0		0-0		
	acc	caa		сса	aaa	at.c	tat		cga	atc	acc	agg		cat	gac	taa		1392
	_		-			_		-	_	_	Thr			-	-	-		
146		450	9		1		455		9			460		9	F			
	atc		gag	acc	acc	acc		acc	agc	atq	cct		acc	ccc	acc	atσ		1440
											Pro							
	465					470	1 -				475					480		
		cct	qcc	cct	qcc	qcc	ccc	agc	aca	qcc	tgg	ccc	acc	agt	cct	qaq		1488
	-		_		_	_		_		_	Trp			-				
154					485					490	-				495			
156	agc	cct	gtg	gtc	agc	acc	ccc	acc	aaa	tcg	atg	cag	gcc	ctc	agt	acc		1536
157	Ser	Pro	Val	Val	Ser	Thr	Pro	Thr	Lys	Ser	Met	Gln	Ala	Leu	Ser	Thr		
158				500					505					510				
160	gtg	cct	ctt	gac	tgg	gtc	acc	gtt	cct	aag	cta	caa	ggt	att	ttc	ggg		1584
161	Val	Pro	Leu	Asp	Trp	Val	Thr	Val	Pro	Lys	Leu	Gln	Gly	Ile	Phe	Gly		
162			515					520					525					
164	gca	gaa	agg	tag														1596
	Ala	Glu	Arg															
166		530																
	<210																	
	<21:				31													
	<212																	
						sar	piens	3										
	<400						_			_		_	_	m)	m)	<b>-</b>		
		Glu	Pro	Thr		Ата	Asp	val	Hls		Val	Pro	Arg	Thr		ьуs		
177		77.3	<b>5</b>		5	<b>7</b>	7.7	7.1	~	10	7	7.7 -	70.71 -	0	15	G1		
	GIU	vaı	Pro		Leu	Asp	Ата	Ата	_ = =	Cys	Arg	Ата	Ата		тте	GTÀ		
181	17 - 1	17-1	n 1 -	20	C	T	77-7	77-7	25	mb	T	C1	77.0 7	30	T	71.		
	vai	vai		Inr	ser	ьeu	vaı		ьeu	Thr	Leu	GTĀ		ьeu	ьeu	Ald		
185	Dha	T 011	35	ሞኤ∽	C1~	C1	Dha	40 uic	17 - 1	7\ ~~	u i o	ሞኮ∽	45 712	G1.,	T 011	7~~		
189	rne	ьеи 50	Ser	TIIT	GTII	стА	55	птэ	vaı	изр	His	60	ura	GIU	ьeи	ALY	•	
	G1++		Δ~~	ጥሎጥ	ጥኮኍ	Sor		Lou	Δ×~	Δra	Gl.		Ser	Δen	ጥህን	Hie		
193	_	TTG	ALY	тър	TIIT	70	Ser	теп	AT 9	nr y	Glu 75	TIIT	DET	тэр	тут	80		
		Th∽	Leu	Thr	Pro	_	Leu	Glu	Δlo	Leu	Phe	Val	Ser	Ser	Phe			
197	Ary	1117	116 tt	T 11T	85	1111	TI-C (I	GIU	n.a	90	1116	Val	OGI	OGI	95	O T 11		
	Lve	Thr	Glu	Leu		בוג	Ser	Cve	Val		Cys	Ser	Val	T.e.u	-	ጥህድ		
200	Ly S	1111	ŲΙU	LCu	JIU	*1TG	Ser	Cys	v a I	O T Y	Cys	JUL	, u 1	LCu	. 1011	- y -		

RAW SEQUENCE LISTING DATE: 02/08/2005 PATENT APPLICATION: US/10/522,668 TIME: 11:47:28

201				100					105					110		
	Arg	Asp	Glv		Ser	Ser	Val	Leu		His	Phe	Gln	Leu	His	Phe	Leu
205	,		115	•				120					125			
208	Leu	Arg	Pro	Leu	Gln	Thr	Leu	Ser	Leu	Gly	Leu	Glu	Glu	Glu	Leu	Leu
209		130					135			_		140				
212	Gln	Arg	Gly	Ile	Arg	Ala	Arq	Leu	Arg	Glu	His	Gly	Ile	Ser	Leu	Ala
	145	-	-		_	150	_	•	•		155					160
216	Ala	Tyr	Gly	Thr	Ile	Val	Ser	Ala	Glu	Leu	Thr	Gly	Arg	His	Lys	Gly
217		_	_		165					170		_	_		175	_
220	Pro	Leu	Ala	Glu	Arg	Asp	Phe	Lys	Ser	Gly	Arg	Cys	Pro	Gly	Asn	Ser
221				180					185					190		
224	Phe	Ser	Cys	Gly	Asn	Ser	Gln	Cys	Val	Thr	Lys	Val	Asn	Pro	Glu	Cys
225			195					200					205			
228	Asp	Asp	Gln	Glu	Asp	Cys	Ser	Asp	Gly	Ser	Asp	Glu	Ala	His	Cys	Glu
229		210					215					220				
		Gly	Leu	Gln	Pro		Trp	Arg	Met	Ala	Gly	Arg	Ile	Val	Gly	Gly
	225					230					235					240
	Met	Glu	Ala	Ser		Gly	Glu	Phe	Pro	_	Gln	Ala	Ser	Leu	_	Glu
237					245			_		250					255	
	Asn	Lys	Glu		Phe	Cys	Gly	Ala		Ile	Ile	Asn	Ala	Arg	Trp	Leu
241		_		260		_		_	265			_	_	270	_	_
	vaı	Ser		Ala	His	Cys	Phe		GLu	Phe	GLn	Asp		Thr	Lys	Trp
245	77- 7	70.7 -	275	77 - 7	G1	70.7 -	m1	280	<b>T</b>	0	<b>61</b>	0	285	70.7	0	m).
248	vaı	290	Tyr	vaı	сту	Ата		Tyr	ьeu	Ser	стх		GIU	Ala	Ser	Tnr
	Wal		Nla	Cln	t/al	V-1	295	т1.	W-1	T 1/6	uic	300	Lou	Tyr	7 00	חות
	305	Ary	лта	GIII	vaı	310	GIII	116	vaı	гу	315	FIO	ьеи	тут	MSII	320
		Thr	Δla	Asn	Phe		Val	Δla	Val	T.e.11		T.e.u	Thr	Ser	Pro	
257	1100	1111	1114	1155	325	1150	VUI	1114	vai	330	OIU	цси	1111	JCI	335	неа
	Pro	Phe	Glv	Ara		Ile	Gln	Pro	Val		Leu	Pro	Ala	Ala		His
261			1	340					345	-1-				350		
264	Ile	Phe	Pro	Pro	Ser	Lys	Lys	Cys	Leu	Ile	Ser	Gly	Trp	Gly	Tyr	Leu
265			355			•	-	360				-	365	-	-	
268	Lys	Glu	Asp	Phe	Leu	Val	Lys	Pro	Glu	Val	Leu	Gln	Lys	Ala	Thr	Val
269		370					375					380				
272	Glu	Leu	Leu	Asp	Gln	Ala	Leu	Cys	Ala	Ser	Leu	Tyr	Gly	His	Ser	Leu
273	385					390					395					400
276	Thr	Asp	Arg	Met	Val	Cys	Ala	Gly	Tyr	Leu	Asp	Gly	Lys	Val	Asp	Ser
277					405					410					415	
280	Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Glu	Glu	Pro	Ser	Gly
281				420					425					430		
	Arg	Phe		Leu	Ala	Gly	Ile		Ser	Trp	Gly	Ile	Gly	Cys	Ala	Glu
285			435					440					445			
	Ala		Arg	Pro	Gly	Val		Ala	Arg	Val	Thr		Leu	Arg	Asp	Trp
289		450					455					460				
		Leu	Glu	Ala	Thr		Lys	Ala	Ser	Met		Leu	Ala	Pro	Thr	
293		_				470	_	_			475	_		_	_	480
	Ата	Pro	Ala	Pro		Ala	Pro	Ser	Thr		Trp	Pro	Thr	Ser		GLu
297					485					490					495	

## RAW SEQUENCE LISTING DATE: 02/08/2005 PATENT APPLICATION: US/10/522,668 TIME: 11:47:28

300 Ser Pro Val Val Ser Thr Pro Thr Lys Ser Met Gln Ala Leu Ser Thr 301 500 510											
304 Val Pro Leu Asp Trp Val Thr Val Pro Lys Leu Gln Gly Ile Phe Gly											
305 515 520 525											
308 Ala Glu Arg											
309 530 312 <210 SEC ID NO. 3											
12 <210> SEQ ID NO: 3 13 <211> LENGTH: 27											
3 <211> LENGTH: 27 4 <212> TYPE: DNA											
5 <213> ORGANISM: Artificial Sequence											
317 <220> FEATURE:											
318 <223> OTHER INFORMATION: Description of Artificial Sequence: an artis	icially										
319 synthesized primer sequence											
<400> SEQUENCE: 3											
322 ccatcctaat acgactcact atagggc	27										
325 <210> SEQ ID NO: 4 326 <211> LENGTH: 23											
26 <211> LENGTH: 23 27 <212> TYPE: DNA											
328 <213> ORGANISM: Artificial Sequence											
330 <220> FEATURE:											
331 <223> OTHER INFORMATION: Description of Artificial Sequence:an artificial sequence.	cially										
332 synthesized primer sequence											
334 <400> SEQUENCE: 4											
335 actcactata gggctcgagc ggc	23										
338 <210> SEQ ID NO: 5 339 <211> LENGTH: 29											
340 <212> TYPE: DNA											
341 <213> ORGANISM: Homo sapiens											
343 <400> SEQUENCE: 5	•										
344 aggatccagt cacgtagcct ggtgactcg	29										
347 <210> SEQ ID NO: 6											
348 <211> LENGTH: 31											
349 <212> TYPE: DNA											
350 <213> ORGANISM: Homo sapiens 352 <400> SEQUENCE: 6											
353 gtagececag cetgagatea ggeaettett g	31										
356 <210> SEQ ID NO: 7	01										
357 <211> LENGTH: 29											
358 <212> TYPE: DNA											
359 <213> ORGANISM: Homo sapiens											
361 <400> SEQUENCE: 7											
362 cgttgatgat ggcggccca cagaagtgc	29										
365 <210> SEQ ID NO: 8 366 <211> LENGTH: 29											
367 <212> TYPE: DNA											
368 <213> ORGANISM: Homo sapiens											
370 <400> SEQUENCE: 8											
371 ctcgaaggct ggcttgccac ggaaactcc	29										
374 <210> SEQ ID NO: 9											

VERIFICATION SUMMARY

DATE: 02/08/2005

PATENT APPLICATION: US/10/522,668

TIME: 11:47:29

Input Set : A:\Q85990 Sequence Listing.txt Output Set: N:\CRF4\02082005\J522668.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date